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A CASE OF INTUSSUSCEPTION.¹

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I WAS first called to see the patient, who was seventy-one years old, on the 29th of June, 1876, and found him suffering from acute pain in the abdomen, with some slight tenderness but no vomiting. Pain was referred to a point two inches below the umbilicus; at this point and to the right and left of it for a distance of two or three inches a tumor could be felt.

Treatment relieved the patient for a short time, but after a few hours the symptoms became so aggravated that Dr. H. A. Martin, of Roxbury, was called in consultation. After the patient began a second time to grow worse there was no doubt but that he was suffering from an obstruction of the bowels. Treatment was directed towards this obstruction and in a few hours completely alleviated this part of his trouble; relief came from stools produced by large enemata of soap-suds, castor-oil, and spirits of turpentine, freely administered, and from copious emesis, the patient vomiting gallons of a reddish-brown liquid in a few hours. He had been feeling poorly for three days before I was first called, having experienced colicky pains, for which he had taken a dose of salts, which had produced a number of loose dejections. After the patient had been relieved from the obstruction, he began to improve under a diet of milk and brandy; this continued until July 9th, when he had a bad day, and complained of cold hands and feet and an undefined feeling as if he were falling to pieces; this was temporary, and he improved until July 16th, sixteen days after his attack, when his pulse and temperature began to increase; this continued until the 21st, the pulse at no time numbering more than eighty beats per minute, and the highest temperature being only 102° F. On the morning of the 21st, three weeks after the commencement of his sickness, the patient passed a portion of his small intestine, which now belongs to the museum of the Harvard Medical School. The length of the intestine passed was 17½ inches; this, however, was only a portion of what came away.²

The specimen was not *inverted* as is usually the case; at its point of

¹ Read before the Norfolk District Medical Society.

² See the results of the post-mortem examination made by Dr. R. H. Fitz, of Boston, February 4, 1877, as appended.

separation it was gangrenous and worm-eaten in appearance ; it also showed traces of the exudation of lymph.

After the passage of the intussuscepted part the patient had a full operation from the bowels. From this time until August 4th, a period of two weeks, he improved, having daily dejections ; his appetite also returned. On this day there was considerable pain in the abdomen, together with such a degree of distention that at one time his breathing was quite seriously interfered with. Dr. Charles B. Porter, of Boston, was at this time called in consultation. On the afternoon of August 4th the patient began to vomit a thick liquid, which appeared to come from the stomach and upper part of the small intestines ; this relieved him. The vomiting, which appeared first at this time, was present more or less during the remainder of his life ; at times it would be suspended for two or three weeks, the longest period being three weeks. It was at intervals excessive, at one time occurring every few minutes for forty-eight hours ; the usual quantity vomited at any one time was about a quart, *six quarts* being ejected during twelve hours. The total amount could have been measured by gallons. That this is true will be seen when I state that the patient vomited sixty-nine times during his sickness. Now to what was this due ? That there was a catarrhal condition of the mucous membrane of the intestine was unmistakable. But what produced this catarrh ? Various explanations have been given, but I accept the following as the most satisfactory : A considerable time before the patient was taken sick there was an accumulation of faecal matter taking place ; this mass remained in one position until it had distended the part of the intestine it had occupied and formed a sort of pouch, and it was from this pouch, which from pressure lost a great part of its nervous tone, that this fluid came. That this was probably true will be seen from the fact that upon the whole the quantity gradually grew less, this diminution being perhaps because the intestine at this point was little by little contracting its calibre. Dr. S. G. Webber suggested that Bernard had found that cutting off the nervous supply promoted the exudation of fluid in the intestines. He also thought that sloughing or injury of the nerves which supplied the diseased part of the intestine might have the same effect. That the distention was considerable, and the loss of nervous force great, is shown by the fact that large quantities of fluid were ejected every week or two for a period of several months. I will state that for a few days before the patient first began to vomit a peculiar condition of things existed, namely, the abdomen began to swell and he had more or less pain ; but what was more noticeable was the disturbance produced by the movement of the fluid, which could be heard all over the room as it changed from one position to another, making the greatest possible noise as it went.

During the first part of November, Dr. Joseph Stedman, of Jamaica

Plain, who had charge of the patient during my vacation, noticed that when the pouch spoken of was distended by gas the part involved in the pouch appeared to be twisted, showing that it was shortened and probably adherent at certain points to the walls of the peritonæum.¹

The cause of the invagination was probably an accident which happened to the patient some two or three months before he was taken sick. Some of his farm hands were baling hay and he was overseeing the work; they did it in a rather slow and bungling manner, and not as he had seen it done when he was a young man; he accordingly stepped up to the bale, seized a strip of the wood used for baling, and in his quick, powerful way showed them how to do it properly. Shortly after this he felt unwell and commenced to hiccough, and continued to do so for about four days. This was relieved by placing him flat upon his back and administering an anti-spasmodic. I also for a few minutes placed a light book upon the stomach. This seemed to relieve him at once. At this time I noticed that when he was flat upon his back the hiccoughing abated, with a return of the distress when he sat up. After staying in bed for twelve or fifteen hours he became entirely free from the trouble, which did not return until his last sickness.

With this history before us, may we not inquire if we had not a fore-runner of what was to come? Flint says "that invagination may transiently appear, giving rise to no symptoms which persist." If this is so, might it not be possible, in view of what took place, that something of this nature happened, but that owing to position the intestine returned to its proper place, to remain there until three months later?

In watching this case, I have been interested in observing how much it has differed from other cases of the same kind, which have been reported, and I have had the thought impressed upon me that it is not always wise to trust to certain prominent symptoms which in books are described as necessary accompaniments of a disease. For instance, we find pain emanating from a fixed point, tenderness of the abdomen, hiccoughing, and vomiting, which Flint mentions as soon becoming, in the early stages, prominent and persisting symptoms, and almost always present. In what particulars is our case instructive? I think all will agree that we should expect to find the most urgent symptoms attending so grave a condition as intussusception, and that if, as in our case, we did not find them, we should be liable in part to forget that it was possible, for obstruction of the bowels is not an unusual occurrence, and intussusception, especially in the adult, is not found in one out of many cases of obstruction.

When my patient was first taken sick his symptoms pointed to obstruction. Intussusception was of course thought of, as were functional colic, acute peritonitis, and obstruction from various causes; as the

¹ See Dr. Fitz's post-mortem examination.]

case progressed the patient was relieved by treatment, and after he began to vomit and pass faecal matter he seemed to be on the high road to health; this was at a time when a most dangerous process was taking place, and that dreaded complication, gangrene, was separating the invaginated portion from the other parts. When I use the term "dreaded" I of course do not mean that gangrene was to be dreaded considering the condition of things which actually existed, — for this was the only way that recovery was possible, — but because such a condition would directly point to the disease from which my patient suffered.

It is to be noticed that no great increase in temperature was present, the thermometer at no time showing a temperature of more than 102° F.

In his anatomical diagnosis, Dr. Fitz mentions an annular stricture. In connection with this annular stricture it may be interesting to notice how the shape and condition of the faeces corresponded with the progress of the constriction. For a time after the accident occurred the character of the patient's dejections was quite natural; then he began to pass faeces of a ribbon shape, flat, and at times some of these ribbon-shaped pieces would be ten to twelve feet long; with this exception the appearance did not change to any noticeable extent for several months, the discharges being as a rule natural; he usually had two or three dejections a day; during the last part of his life he had fewer discharges, and it was noticed that at times the faeces resembled sheep manure, being made up to a great extent of small, hard, round lumps. It was, however, only a short time before his death that he experienced much pain when he went to stool; that he got along so comfortably and had such free discharges appears remarkable, when we consider the smallness of the orifice at the point of constriction, as described by Dr. Fitz.

For about a week before his death he would at times complain of great tenderness and pain in the left groin, at about the point where the constriction was found.

The swelling of the feet and the nephritis referred to by Dr. Fitz did not seem to play any very important part in hastening his end, although it necessarily was a factor; careful examinations of the urine showed nothing very abnormal.

The general condition of the patient for the last few days before his death was as usual, although it was observed that when he had a dejection he either vomited or had some nausea; still he was feeling pretty well, especially on the Sunday previous to his death, which occurred six days later. Nothing of importance occurred for the next three days of this week. On Thursday morning, at about two o'clock, he was seized with severe pain, which was relieved only by repeated injections of morphine; this pain was so severe that it appeared completely to prostrate

him; there was also a return of the vomiting; the pain and vomiting again came on during the afternoon and evening of Thursday, and persisted during the night and the next day; this abated towards the evening of Friday, and for the last forty-eight hours of his life the patient was without pain. He died quietly on the afternoon of Saturday, February 3d, after an illness of over seven months.

The immediate cause of death was probably the extreme exhaustion brought on by this sudden attack of pain and vomiting, although it is doubtful if he could have survived much longer, considering the condition of his intestines.

The treatment during this long period was directed principally to sustaining the strength of the patient, the obstruction having been removed during the early part of his sickness. The complication which troubled us the most was the vomiting, for the relief of which we tried almost everything that had ever been used; that which appeared the most successful was repeated feeding with small quantities of milk and brandy every half hour, as recommended by Dr. Morrill Wyman, of Cambridge, who saw the patient in consultation, the idea being to give the intestine just as little to do at any one time as possible, but yet to sustain the patient. The result was very satisfactory. The drawing for the accompanying cut was made by Dr. Wyman.

I am indebted to Dr. J. B. S. Jackson and Dr. R. H. Fitz for much valuable information in regard to the pathology of this subject, and to the gentlemen I met in consultation for their many practical hints for the conduct of the case.

Autopsy. The autopsy was made fourteen hours after death. Rigor mortis absent; the body anæmic and emaciated; feet slightly swollen; nothing abnormal about the external appearance of the abdomen. Head not opened.

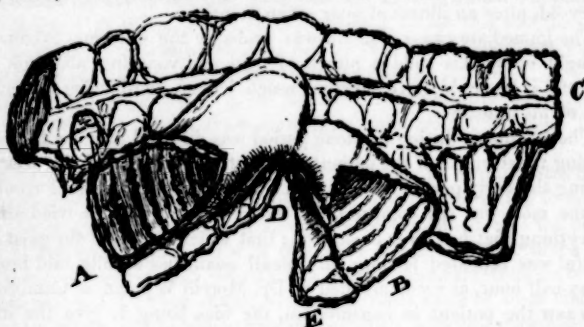
The pericardium contained a few drachms of clear yellow fluid. Heart small; cavities not remarkable; aortic and pulmonary orifices sufficient. The aortic and mitral orifices each presented a single fibrous vegetation, apparently old. The walls of the heart were of a reddish-brown color tinged with yellow, and somewhat opaque. The fibres generally were found to be in a state of fatty degeneration, containing also an abnormal amount of yellow granular pigment. The coronary arteries were healthy and the aorta remarkably free from any changes.

Both lungs were without adhesions, posteriorly œdematous, otherwise not remarkable. Spleen atrophied. The kidneys showed marked granular atrophy from chronic interstitial nephritis. Bladder healthy, prostate moderately enlarged. Liver small, with extensive fatty infiltration.

The abdominal cavity contained several ounces of opaque, yellow, puriform fluid, and the parietal peritonæum was sparsely spotted with

small brown specks, about a line in diameter, apparently old ecchymoses.

In the left lumbar region, beneath a portion of the small intestines, a coil of the ileum was found firmly and closely adherent to the descending colon, three and one third feet from the ileo-cæcal valve and a few



A, upper portion of intestine, enlarged, and walls thickened; B, lower portion of intestine; C, sigmoid flexure of colon to which the intussusception was united; D, point of intussusception; E, portion of mesentery.

inches above the sigmoid flexure. A bridge was thus formed, beneath which lay a portion of the small intestine not presenting any appearance of constriction. The adherent portion of small intestine formed a right angle, the upper arm being moderately distended, terminating in a globular, dilated portion of the volume of a large plum, separated from the lower arm by a constriction, the surface of which was quite opaque, as was the thickened peritoneal coat of the intestine in its vicinity. A portion of the left side of the omentum was adherent to the anterior surface of the constricted portion of the intestine as an elongated band. A fibrous cord, a line or two in diameter, extended downward from the anterior surface of the constricted portion of the ileum, and was continuous with an elongated epiploic appendage arising from the sigmoid flexure. A Y-shaped cord, ten inches in length and a line or more in diameter, extended upwards to the right among the coils of small intestine, the two legs of the Y being adherent to the upper part of the small intestine by broad attachments separated from each other by a distance of nine inches, the upper leg being two and one half feet from the pylorus. All the cords were of a purple color.

The intestinal constriction was six feet five inches from the pylorus and seven feet six inches above the ileo-cæcal valve. The mesentery presented a slight, funnel-shaped depression, directed towards the stricture where it was attached to the intestine; its posterior peritoneal surface was more thickened and opaque than the anterior surface, which

appeared relatively normal. The course of the vessels within it were not to be made out from the abundant fat tissue present.

The intestinal canal at the constricted portion measured from within nearly one inch in circumference, its diameter being estimated as one third of an inch.

On cutting through the stricture along the mesenteric border of the intestine, the internal measurement at the stricture was found to be seven eighths of an inch. Cicatricial tissue united the upper and lower portions of the intestine here, their mucous and muscular coats not being continuous but turned inwards towards the canal of the intestine. Looking from within an annular ulcer was thus apparent, completely encircling the tube, the base being formed by the cicatricial tissue mentioned.

All the coats of the intestine for some distance above the stricture were thickened, the muscular coat in particular, while below no alteration in them was observed. Small valvulae conniventes were present above and below the constriction.

The mucous membrane lining the globular pouch formed by the dilated intestine above the stricture was ulcerated to a moderate extent, in part thickened and roughened. A communication had been established between it and the descending colon, a half inch in circumference or about one sixth of an inch in diameter.

The stomach was largely distended with gas and contained a small amount of an opaque gray fluid. The small intestine immediately above and below the stricture contained a thick, opaque, yellow fluid. Scybala were found in the large intestine, between the cæcum and the fistulous communication with the small intestine; below the latter the large intestine was widely distended with gas.

Anatomical Diagnosis. Annular stricture of the upper part of the small intestine, with the loss of several feet of its length, and fistulous communication with the descending colon. Chronic peritonitis. Fatty degeneration of the heart. Chronic interstitial nephritis. Fatty liver.

NOTES ON SOME OF THE MOST FREQUENT FORMS OF SKIN DISEASE.¹

BY F. B. GREENOUGH, M. D.

NUMBER IV.

Seborrhœa. — In acne we have an eruption resulting from the occlusion of the sebaceous follicles; the functional activity of these glands may be increased without their becoming occluded, and this abnormal condition is known by the name of seborrhœa. When this exists we

¹ Continued from page 433.

find that the sebaceous matter being secreted in greater quantities than usual, it collects on the skin about the opening of the gland unless it is washed or rubbed off as fast as secreted. When the secreted sebum is in an oily or semi-fluid form, it will merely give the skin a shiny, greasy appearance, but when it is thicker, owing for one thing to the admixture of epithelial cells, it will be seen on the cutis in the shape of dirty whitish or yellowish crusts. This occurs most frequently on the scalp, and in the great majority of cases in infants, especially quite young infants. I have noticed that babies who have little or no hair are much more liable to be troubled in this way than those whose scalp is furnished with an early growth, and suppose this to be due to the fact that when each hair follicle has a hair growing from it, the sebum performs its natural function, namely, to lubricate and keep the hair moist and soft, whereas when the hair is not yet developed the secretion of the sebaceous gland must collect at the orifice of the follicle from which it is secreted, unless removed by washing, brushing, etc. This collection of sebaceous matter is found chiefly upon the scalp, and the appearance of a child's head affected with *seborrhœa* is briefly as follows: a continuous crust, varying in thickness according to the severity of the case, is seen covering the top of the head from the occiput to the limit of the hair follicles on the forehead. It is of a dirty yellowish color; in some cases, where the child has been exposed to much dust and dirt, being almost black. It can easily be picked off with the finger-nail, and the skin under it will usually be found to be normal, although at times it may be slightly congested. A piece of this crust rolled between the finger and thumb will crumble up and leave a greasy look on the fingers. There is nothing brittle about these crusts, such as is found in scabs resulting from the coagulation of pus and serum. Under the microscope they will be seen to consist of fat globules and epithelium. In many cases of *seborrhœa* of the scalp in children this condition is due not entirely to an abnormal increase of the secretion of the glands, but also to a neglect of proper care and cleanliness on the part of those having charge of the child; and in some cases this latter is without doubt the only cause, there being an idea, especially amongst our foreign population, that the removal of this "milk crust" is injurious to the child. Not unfrequently the accumulation of dried sebaceous matter acts as an irritant, and calls forth an eczematous eruption of the scalp to complicate matters. This will be more appropriately treated of under the head of *Eczema*.

Occasionally, instead of having a continuous crust covering the upper part of the head, we find two or three or more patches on different parts of the scalp and sides of the head; these are round or oval, and vary in size from that of a nickel cent to a silver dollar. The character of the crust is the same as when the whole scalp is affected. Simple

seborrhœa of the scalp could not very readily be confounded with any other affection of that region. The fatty character of the crust, the fact of its being confined to that part of the skin where the hair follicles are developed, and that the skin under it is natural, or perhaps slightly congested, would make the diagnosis a clear one. With regard to treatment, the first indication is of course to remove the crust, and this is best done by means of a poultice of flaxseed meal, the emollient power of which may be increased by pouring over it a little olive or cod-liver oil. One night's application will usually suffice; in the morning the crust may be washed off with soap and warm water, and in the majority of cases an occasional washing will prevent its re-forming. When, however, the secretion of the follicles continues to be excessive, the head may be washed twice a week with the German soap, and a lotion of glycerine, bay-rum, and water, with a little carbolie or tannic acid in solution, may be applied with a sponge or soft brush. When seborrhœa exists on a scalp where the hair is much developed the crusts should always be removed by washing and brushing, and never by means of a fine-tooth comb, and the same may be said in general of all troubles of the scalp.

Although very much more frequent in children, seborrhœa of the scalp is found at times in adults. In the comparatively few cases that I have seen the trouble was limited to one or more separate patches, and did not cover the whole scalp. The treatment is about the same as in the case of children, except that where the hair is thick or long the crusts can be softened down easier by rubbing oil into them than by means of a poultice. The affection will also be found to be more unyielding to treatment, requiring usually the use of some of the preparations of tar, and indications for tonic constitutional treatment are apt to be found.

There is a modified form of seborrhœa which is very often seen in adults, and is by some authors described under the name of *pityriasis capitis*.

In these cases there is a great deal of epithelium mixed with the sebaceous matter thrown off, and instead of forming an adherent crust the whole of the scalp is seen to be covered with grayish furfuraceous flakes or scales which will come off at the slightest touch, and which are found abundantly scattered through the hair, to say nothing of the coat collar or dress of the patient. These flakes consist of sebaceous matter and epithelium, and are popularly known as dandruff.

This condition of the scalp, besides being very annoying in causing the head to look untidy and ill-cared for, will in time produce baldness, or at least thinness of the hair. According to the authors, this is one of the most frequent causes of early loss of the hair. With regard to diagnosis, some slight cases of psoriasis of the scalp might be

mistaken, perhaps, for this form of seborrhœa, or *vice versa*. But in psoriasis the scales will be more abundant and will adhere much more firmly to the scalp; they will not give the fatty feeling to the finger, when rubbed up, that the flakes of dandruff do, and some of them, at least, will have the peculiar glistening appearance characteristic of psoriasis. There will usually also be found a line of congestion at the margin of the hairy scalp on the forehead and temples in cases of psoriasis, and generally there will be patches seen elsewhere on the body, or a history of the previous existence of such.

In cases of eczema capitis, after the acute symptoms have subsided, the scalp will be in a condition much resembling this form of seborrhœa; in fact it has seemed to me that the one sometimes runs into the other. As long as there is any exudation of serum the case is of course eczema, and evidences of the eruption having extended beyond the hairy scalp will generally be found, especially about the ears, behind which the skin will be seen to look red and shiny.

With regard to treatment, the patient should be informed that to insure a cure he must make up his mind to follow the course prescribed, thoroughly and regularly. The head should be shampooed twice a week with the *tr. saponis viridis*, and when possible it is best to have this done by a professional hair-dresser, who should be instructed to be very thorough in washing the lather off in several fresh waters, as unless this is done the German soap will dry the hair too much. Even with this precaution it may be necessary to apply some oil to the hair after it has been rubbed quite dry. Fresh, sweet almond oil is a good lubricator, or a mixture of castor-oil and alcohol (they form a perfectly smooth mixture) may be used. The dandruff should be brushed out of the hair, not combed, and a solution of oil of cade in oil or alcohol, according as the hair is very dry or not, applied to the scalp with a soft brush or sponge, the hair being parted with a comb in different directions, and the application made to the scalp at the part. When the amount of dandruff is not excessive, or in cases where the oil of cade is objected to, a solution of carbolic acid, gr.v. to 3i., in glycerine or alcohol may be substituted.

Where the hair is coming out, or has already become thin, on the days when the shampooing and application of the oil of cade does not take place, a stimulating lotion may be applied. The washes most commonly used contain tincture of cantharides, tannin, or quinine, with alcohol, brandy, or bay-rum.

Seborrhœa is also found on the face, and more especially about the nose and the upper part of the cheeks. In some cases the affection is so slight as hardly to warrant its being considered pathological, such patients having what is called a fat or greasy complexion.

In other cases, however, the secretion is abundant enough to col-

lect on the skin small, fine flakes, which at a short distance give the appearance of the nose and cheeks having been sprinkled with a little sand. The ducts of the follicles are seen to be large and distended. A certain amount of congestion is found in some cases, and in such we see red spots or patches with little dry flakes scattered over them. Where this is much developed it gives a rough form of a butterfly on the face, the bridge of the nose representing the body, and the wings extending on each cheek under the lower eyelid. The term *seborrhœa congestiva* has been very appropriately applied to this form of functional sebaceous trouble, but it has also been given to a much more serious and rarer disease, *lupus erythematosus*, which, although commencing usually as an affection of the sebaceous glands, is a disease *sui generis*, resulting in structural changes in the cutis. The diagnosis of *seborrhœa* of the face is usually clear, but in cases where the skin is washed frequently the sebaceous matter may not be seen, and in the congestive form in such cases we should only see a few spots of congestion, the exact nature of which might be puzzling. The skin will, however, have a greasy appearance, and the situation of the redness will be suggestive. The absence of inflammatory pimples will exclude *acne*, and that of distended capillaries *acne rosacea*, although it must be borne in mind that *seborrhœa* is not unfrequently accompanied by or complicated with these efflorescences. The fact that it has been gradually developed will prevent confusing it with the acute facial erythemas. The treatment will depend on the severity of the affection. In the simple, non-congestive form the occasional use of German soap, followed by an astringent or carbolic acid lotion, will prevent the manifestation of the affection and in time correct it. Where there is some congestion the oils of tar may be applied on retiring and washed off in the morning.

Although perhaps hardly coming under the head of skin disease, the *sulcus* behind the *corona glandis* may be mentioned as a locality where a superabundant secretion and collection of sebum is very apt to take place, and here, as on the scalp, the lack of proper cleanliness may be the chief if not the sole cause. In cases of congenital *phymosis* especially is the accumulated sebaceous matter likely to set up a *balanitis*. Proper washing, in case of *phymosis*, by means of a syringe and the use of an astringent lotion will be all the treatment requisite.

From my list of the first five thousand cases of skin disease observed at the Boston Dispensary it appears that three hundred and seventy-one, or 7.40 per cent., were cases of *acne*, and forty-five, or nine tenths per cent., cases of *seborrhœa*.

This latter number does not, however, by any means give the true proportion of cases of *seborrhœa* seen, as only those cases where the disease existed uncomplicated were entered under that head, all of the

many cases of seborrhœa of the scalp in children, where eczema was found coexisting, being classed with the eczemas.

Milium. — There is a slight affection of the sebaceous follicles of which it may be well to speak, as it sometimes develops to such an extent as to call for treatment, especially in the case of ladies who are careful of their complexions. I refer to the small collections of sebaceous matter known as milium. These are small, round bodies about the size of a pin's head, found chiefly about the cheek-bone and eyelids. They are very superficial, so much so that the layer of epithelium which covers them is transparent, showing their color, which ranges from white to a pretty decided yellow. When abundant they give a rough look to the skin. They probably result from a sebaceous follicle whose opening has become obliterated, and whose glandular structure has ceased to carry on its function. The contents are quite hard, and different from that of a distended but still active gland. On the skin of the penis, especially near the root, they are pretty nearly constant, and in this situation they attain the size of a mustard seed, and here also they occasionally set up inflammation, producing quite a large and sore pimple. On the face I have never seen acne due to these bodies. To remove them the epithelial covering should be divided (a sharp cataract needle is very handy for this purpose) and then the little mass should be squeezed out. As a rule they do not fill up again; if they should; a sharp crayon of lunar caustic applied to the cavity after the contents have been removed will prevent recurrence. It should be remembered when removing them for the purpose of improving the complexion that a little blood will probably settle in the cavity left, and for a day or two be more of a disfigurement than the original trouble. The constant and energetic use of German soap will also remove them, when, as is sometimes the case with ladies, even a slight cut is dreaded.

(To be continued.)

A CASE OF SUDDEN DEATH AFTER EMBOLISM OF THE AXILLARY ARTERY.

BY H. E. HOPKINS, M. D., BUFFALO.

At midnight of February 16th I was called in great haste to see G. N. W., a prominent business man, who had been confined to his house for eight days previously with a slight pneumonia of the left lung, from which he was rapidly convalescing, having on the previous day a normal heat, pulse, and rate of respiration, and nearly normal condition of lung.

On reaching the bedside I found the patient and his family in great alarm, all thinking him dying. His wife told me that he had seemed

unusually well during the afternoon and evening, had retired at ten, and that about midnight she was awakened by his irregular breathing, and found him greatly oppressed for breath, and pulseless. She had been vigorously at work applying external heat and counter irritants with brandy and ammonia internally. W. seemed to me to be suffering more from fright than anything else. He said, "I am dying, for my right arm is already dead." Upon examination I found the right arm cold, in spite of hot bottles and flannels, without pulse at wrist, elbow, or axilla, and the whole limb of a peculiar shrunken or collapsed appearance. The pulse was distinctly felt in the right carotid and temporal arteries, and also at the left wrist, and was steady and regular, but a little soft, at eighty-six per minute. I diagnosed embolism of the right axillary artery and tried to quiet my patient's alarm. Not succeeding entirely in my attempt, at about four A. M. I advised consultation, and Dr. George N. Burwell met me and concurred in my diagnosis.

During the day following W. complained a good deal of pain, numbness, and tingling in the arm, also of pain like dyspepsia in the region of the stomach, and of general restlessness and prostration. The abdomen was largely distended with flatus, but not tender. Under the use of opiates and stimulants he rallied during the evening and night, and on Sunday, the day following, was in every way comfortable. The circulation was restored to the right arm, so that the pulse could be felt at the wrist, the temperature and pulse were normal, and the respiration during sleep or quiet was twenty-four per minute. He was clear-headed and hopeful.

At noon Dr. Burwell, by appointment, saw him with me, when we found the improved conditions of the morning still more decided. We agreed that, so far as we could detect, the functions of the heart, lungs, and nervous system were fairly performed.

We listened to the heart, and both heard the two sounds with moderate distinctness, and neither detected any unusual sound. At three o'clock of that afternoon I was summoned in haste and found my patient dead. I learned that he had continued comfortable in every way, that at three o'clock he took a glass of champagne and said pleasantly, "Now I will turn over and have a good nap," but before his son could get round the bed to pull a pillow from under his right arm, so that he could turn, he threw his head back, gasped, and died.

There was no convulsion and no struggle for breath, and when I reached the house, ten minutes later, there was no capillary or venous congestion.

Post-mortem examination could not be made.

RECENT PROGRESS IN SURGERY.

BY J. COLLINS WARREN, M. D.

*Transport of Sick and Wounded by Pack Animals.*¹ — The subject of the transport of sick and wounded by pack animals has latterly attracted much attention in the army, owing to the frequent and difficult campaigns of late years against the Indians. A number of reports on the devices employed during the various expeditions have been received at Washington, and these have been embodied in a report which gives at the same time much valuable information on the means employed by other nations to transport the wounded from the battle-field. The circular is elaborately illustrated, and is a fitting supplement to the very valuable report on the transportation of wounded by rail which we have alluded to in a previous report.²

The great difficulties with which we have been obliged to contend in our Indian campaigns have placed the ambulance service on a totally different footing from that adopted by European countries. Our expeditions have penetrated unexplored regions, the engagements have taken place in situations altogether inaccessible to wheeled vehicles, and not infrequently it has been found necessary to rely upon such expedients as can be improvised while on the march. Under these circumstances our medical officers have been obliged to rely on their own ingenuity or to follow the example of the savage and adopt such rude devices as are employed by him. "The introduction of measures tending to the establishment of an ambulance system in the United States army is of recent date, yet it has been acknowledged by the most competent foreign authorities that towards the close of the war our sanitary field service had attained a thorough organization." During this period a number of inventions were forced upon the medical department, and many European methods were tried, but they failed to meet the necessities of our campaigns, in the latter case chiefly on account of the difficulty of providing animals trained to carry them.

The material required in a complete system of army hospital transport is classified by Dr. Otis as, (1) stretchers or litters carried by men, (2) litters wheeled by men, (3) conveyances borne by animals (litters, cacolets), (4) conveyances drawn by animals (ambulance wagons). Dr. Otis thinks it is not improbable that the hand-stretcher will be perfected to serve as a uniform means of support in almost all military exigencies for patients who require transport in a recumbent position. "Eventually, it will probably be so constructed as to answer

¹ Circular No. 9. War Department, Surgeon-General's Office. Washington, March 1, 1877. A Report to the Surgeon-General on the Transport of Sick and Wounded by Pack Animals. By George A. Otis, Assistant Surgeon, U. S. Army.

² The JOURNAL, December 25, 1875.

not only as a litter to be carried by men, but as the permanent couch for the soldier from the moment he is disabled until he reaches a fixed hospital, having such adjustments that it may be placed on wheels and drawn by men, or be carried by pack animals, or laid on springs, or swung in special ambulance wagons, supply wagons, or other wheeled vehicles drawn by animals, or transported by rail or water." The hand-stretcher will thus come to be regarded an implement as essential in the sanitary outfit as the musket and spade in military operations.

As early as our Florida campaign and during the Mexican war wounded were conveyed from the field by the ordinary single and double horse-litter. During the war of the Rebellion attempts were made to introduce the very ingenious and useful cacolets and double litters employed in the French and English armies in the Crimea, and subsequently by the French in the Italian campaign. They have been used also by Spain and Portugal. The Italian medical inspector, De Cortese, reported most favorably upon their utility in the rocky defiles and narrow wooded paths of the Tyrol. The European cacolets and litters, are slung from the sides or carried upon the backs of trained mules. When the latter were not to be obtained the system failed, as in India during the Sepoy rebellion, and in New Zealand. In Mexico the French were provided with trained animals and could use their litters, which on that occasion were an adaptation of the ordinary hand-stretcher to the purposes of a single-litter mule conveyance, while the Austrians, relying upon mules picked up in the country, derived little benefit from their litters. Dr. Otis thinks that if means could be devised to secure such stretchers on pack animals without pitching them so high as to endanger the patient and encumber the animal, such arrangement would be the simplest and best. In our late war these litters were found useless for the same reasons that had obtained elsewhere. Provided mules of sufficient strength and docility can be procured, with attendants capable of training and harnessing them properly, of placing patients on the conveyances and taking care of them, the value and importance of these litters and cacolets is conclusive. They can be packed compactly and easily carried on the march, the mules conveying supplies or doing other field service when not required for sick-transport. They can be adapted to the roughest service. Moreover two wounded men can be transported by one mule, only one muleteer being needed for every two mules. The advantages of such a method are considered so obvious that Dr. Otis would recommend its adoption in our army, notwithstanding the difficulty in obtaining suitable animals and men properly instructed to train and take care of them. The form of pack-saddle preferred is the *aparejo*, drawings and a full description of which are given.

The mode of transporting the wounded in our Indian campaigns is

an imitation of a litter described by the earliest travelers among the North American Indians. The *travail*, or one-horse litter, consists in its simplest form of two long poles, which serve as shafts for the horse at one end, while the other ends rest upon the ground. Two cross bars at suitable distances unite these poles and thus form the frame for a litter. A canvas blanket, buffalo robe, or network of raw hide forms the bed of the *travail*. The elasticity of the poles takes the place of springs, and renders the jolting less painful than might be expected. Indeed, men transported in this manner have preferred their conveyance to the ambulance wagon. A simple arrangement enables the litter to be separated from the shafts if necessary. Over rough ground and in crossing streams the rear ends of the poles can be raised by men detailed for the purpose. Its simplicity of construction, the facility of transportation, the regularity of its motion, its adaptability for any kind of ground, and the fact that it requires but one animal and one man to work it are advantages that have made it popular with our army surgeons, who have been obliged, from lack of an organized system, to devise such methods as circumstance permitted. Some of the severest injuries, as gunshot fractures of the thigh and wounds of the viscera, have not prevented patients from being conveyed in this way with comparative comfort. The two-horse litter is apparently a much more agreeable method of transportation. A similar litter is used, but with longer poles, one horse being harnessed in front and the other behind. Each horse requires two men to guide it. Two animals and four men are therefore necessary to transport one patient. This litter is far more difficult to manage than the *travail*, and is attended with some dangers to the patient from which the other is free. They have both been extensively used in our campaigns. Mules are easily trained to drag or carry these litters, and the ordinary pack mules are employed. He goes out packed with commissary supplies and returns generally with a litter. These rude expedients are preferred by General Sherman to the various inventions. He says: "This matter, as well as others of a similar nature, may well be left to the ingenuity of the troops interested, who are fully qualified to take care of themselves in all the contingencies of war." In this opinion Dr. Otis does not coincide. In the Modoc campaign the ordinary methods were found unsuitable, and a form of mule litter was devised by Assistant Surgeon H. McElderry, and proved serviceable. The litter was carried upon the mule's back lashed to the *aparejo*. It requires no special training to accustom the mule to its use; its width is such that the animal can traverse the narrowest defiles and ledges, or crowded roads, without danger, an advantage which the European litters, carried at the side of the animal, do not possess. The litter can be folded so as to permit a load of grain to be packed upon it. An adjustable iron support enables the surgeon to

slung a fractured leg in suitable apparatus, and a simple device permits one to cover the whole with an awning.

Some such contrivance as this would seem to be admirably adapted to the exigencies of our western campaigns.

The reader will be well repaid by a careful study of Dr. Otis's report, which cannot fail to be of great value to army surgeons, and, like all that emanates from the distinguished writer's pen, of great interest to the profession at large.

Soft-Rubber Tracheotomy Tubes. — This form of tube has been introduced in England lately by Mr. Marrant Baker, the advantages claimed for it being its flexibility and the non-irritating character of the material. Ulceration is thereby avoided, and the secretion from the trachea is less than when other tubes are worn. The tube is single, and must therefore be removed from the trachea to be cleansed. Its non-irritating character, however, renders this less often necessary, and, although flexible, it slips back quite readily into the trachea. It is customary with those who employ this form of tube to substitute it for the rigid tube on the fourth day. In a recent society report in the *Lancet*,¹ Mr. House reported the case of a patient who had been tracheotomized ten years previously for syphilitic disease of the larynx, and had since worn a tube; for seven weeks he had been wearing a soft rubber tube, and on the day of entrance to the hospital had, while endeavoring to remove it, torn the shield from the tube, which slipped back into the trachea, and was eventually with difficulty extracted from the right bronchus. The red rubber, of which the tube was composed, was found to be quite rotten. It was evident that the wound had formed an annular contraction around the tube sufficient to resist the efforts at withdrawal by traction on the shield. Improvements have lately been made to obviate these dangers by the introduction of canvas between the layers of the tube to strengthen it. It is considered important to use the "No. 1 red rubber." Rubber can easily be made brittle during the process of curing, but if properly prepared may retain its elasticity for two or three years. Mr. Howard Marsh had recently a case which showed the advantages of the soft tube, symptoms of commencing ulceration of the trachea disappearing on the substitution of a soft tube for a metal one. A number of cases of separation of the tube, have, however, been reported, and although this catastrophe has been caused by the use of improper material in the manufacture of the tube, the possibility of the occurrence will probably stand in the way of its general adoption by the profession. A case was recently reported at the Medical and Chirurgical Society,² where a silver tube had become detached from the shield and had slipped into the trachea. On removal a soft rubber tube was intro-

¹ The *Lancet*, April 7, 1877, page 495.

² *British Medical Journal*, May 26, 1877.

duced, but it partially collapsed, and, being choked with mucus, and air being driven into the cellular tissues of the neck, it had to be replaced in three or four hours by a metallic tube, which gave immediate relief.

We understand that Codman and Shurtleff have samples of this form of tube.

(*To be concluded.*)

ANNUAL MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY.

THE society met to hold its ninety-sixth anniversary in the hall of the Lowell Institute, at twelve M., on Tuesday, June 12th. The president, Dr. Cogswell, occupied the chair.

Dr. John M. Crocker, of Provincetown, read the first paper, on Erysipelas and Puerperal Fever. The reader stated that he would not attempt to refute the testimony of physicians that in an epidemic of erysipelas puerperal fever is more likely to occur than at other times, but he was inclined to think that in many epidemics of erysipelas puerperal fever does not occur epidemically or sporadically, and that where the two maladies do coexist, unmistakable evidence of the presence of some septic material other than erysipelas may often be discovered. It is very desirable to know the connecting link — the essential element — in the production of child-bed fever. But though much has been written on the subject we seem to be no wiser than formerly as to what this element is. The reader reported a series of cases of erysipelas as recently observed by himself in a town at the extremity of Cape Cod, not in his view particularly favored in its sanitary condition. During this time several cases of confinement were attended by himself, and none of the patients were attacked with puerperal fever. A similar immunity from puerperal fever attended his patients who were confined while an epidemic of scarlet fever was prevailing.

In the discussion which followed the reading of the paper, Dr. Cornell remarked that he did not suppose erysipelas had much to do with the causation of puerperal fever, and that many of the diseases which we regard as contagious are not so much so as we consider them to be.

Dr. Osgood said that in 1835 he had three fatal cases of puerperal fever in the course of three weeks. Erysipelas prevailed at that time.

Dr. J. B. S. Jackson had no doubt that there is some connection between the two maladies under discussion. In his view we should not attend a case of childbirth if at the same time we have under our care a case of erysipelas.

Dr. John H. Gilman, of Lowell, read a paper on Diphtheria. He reviewed the history, symptoms, pathology, sequelæ, etc., of the disease, and stated that he regarded diphtheria in its primary stage as a local disease, infecting the system by the absorption of poisonous or putrescent matters from the throat. Our hope of controlling the disease is to observe and treat it early. And the importance of topical applications to the throat in the early stages of the exudation was insisted upon. If the disease extends to the larynx and severe dyspnoea ensues, tracheotomy is to be employed as a last resort.

Dr. T. B. Curtis in commenting on the paper said that the most successful results in tracheotomy in diphtheria had been obtained in Paris. There it is performed early, and not as a last resort, to rescue the patient from consummated asphyxia.

Dr. Bronson said that he had recently listened to a discussion in which very different views from those advanced by the reader were held by the participants. Our treatment of the disease will be largely influenced by our belief as to whether it is a local or constitutional disease *ab initio*.

Dr. Chenery, of Boston, stated that in an extensive epidemic in Maine, in 1862, he had treated nearly one hundred and fifty cases of diphtheria, and that nearly all recovered where the patients had been previously robust and were seen early. He gave the hyposulphite of soda in small and repeated doses. He further stated in reply to questions that they were not cases of tonsillitis, but to his mind cases of true diphtheria.

Dr. Clarke, of Cambridge, said that he had tried Dr. Chenery's treatment, as reported in the JOURNAL some time ago, in a dozen or more cases, and had found it to be no more satisfactory than any other. A large proportion of his cases in which he employed it had died.

Other gentlemen referred to the difference between diphtheria and membranous croup, the one being a constitutional disease attended with prostration, the other an acute disease of a sthenic inflammatory nature.

Another said that he always found an increased temperature in the early stages of diphtheria, and so tried to abstract heat.

Dr. W. W. Eaton read a paper entitled Alcohol, its Use and Abuse in Disease. It was in the main a protest against free stimulation in acute disease. Some of the author's conclusions were: That alcohol is in no case a food for the body; that continuously and largely given it destroys the appetite, produces torpor, prolongs febrile debility, and protracts the crisis; that sparingly and judiciously given in some critical states of acute disease, in anæmia and weakness of the heart, it is often beneficial; that it sometimes stimulates the appetite and aids assimilation; that it ranks with the poisonous drugs, and should be prescribed with like caution.

Dr. Bowker indorsed the paper as to the uselessness of alcohol, generally, in advanced stages of typhoid fever.

Dr. Garland, of Boston, criticised the reader's statement as to the physiological action of alcohol. Its primary as well as its secondary action should be considered. The carbonic acid eliminated by the lungs and the urea excreted by the kidneys are diminished under the administration of alcohol, so that it does not favor retrograde metamorphosis. Its excessive use does favor waste, but not physiologically. If taken in excess on an empty stomach it causes a chronic gastric catarrh and deranges the secretory power of the stomach; food is not properly digested, and there is malnutrition of the body.

Dr. George M. Garland, of Boston, in a paper on Cell Emigration and its Relation to Inflammatory Processes, presented a careful *résumé* of the views of the leading German pathologists.

Dr. Samuel W. Torrey, of Beverly, read a paper on Intra-Uterine Infections in Post-Partum Hæmorrhage. He considered at length the use of the

solution of perchloride or persulphate of iron for the arrest of post-partum hæmorrhage, and mentioned the dangers which attend the employment of the agent. He thought its efficacy due to its constricting action and not to its coagulating properties. If we could find an injection which would constrict and not coagulate, we should get rid of the principal source of danger which attends the employment of the iron solution. Such an agent is found in Churchill's tincture of iodine, and its use has been recommended by eminent practitioners in New York and elsewhere.

Dr. William P. Bolles, of Dorchester, read a communication on Splints for Colles's Fracture. He exhibited a large number of the various forms of splints that have been devised for the treatment of this fracture, and also a splint of his own invention, curved to fit accurately the spiral curve of the fore-arm. He reported several cases of very satisfactory results from the use of his splint, and showed a number of patients with the splints applied.

Dr. W. Symington Brown, of Stoneham, reported a very interesting case of skin grafting, and exhibited the patient. A young lady met with the entire loss of her scalp in September, 1872, by having her hair caught in a revolving belt. The scalp was replaced by one of the workmen, but subsequently the torn parts gradually shriveled and were cut away. In May, 1873, Dr. Brown began to graft, and during the succeeding three years over thirteen hundred different grafts were taken from one hundred and eighty different individuals, and as each graft was cut in two, two thousand six hundred pieces of skin were applied. The patient has had three attacks of what appeared to be pyæmia. The entire scalp, excepting a small space over the left eye, has healed. The torn eyelids still remain raw, but it is hoped that ere long a plastic operation may cause them to heal.

On Wednesday morning the society reassembled at the Lowell Institute. After the reading of the records, the action of the board of trial was confirmed, and it was voted, in accordance with the by-laws, that Drs. S. M. Gale, S. Alden, C. T. Hubbard, and C. A. Wheeler be and are expelled from their membership of the Massachusetts Medical Society.

The secretary read the names of fifty-one Fellows admitted since the last annual meeting, and of seventy-four whose deaths had been reported. The treasurer read his report, and the reading of papers was then resumed as follows:—

Dr. Edward Wigglesworth, of Boston, read extracts from the reports from the district societies. They were (1.) From Franklin District, by Dr. E. R. Campbell. (2.) From Hampden District, by Dr. F. W. Chapin. (3.) From Middlesex East District, by Dr. F. Winsor. (4.) From Suffolk District, by Dr. T. B. Curtis.

Dr. Henry W. Dudley, of Abington, then presented a paper on Endometritis and its Treatment by Scarification. To Dr. E. D. Miller, of Dorchester, a fellow of the society, belongs, in the opinion of the writer, the credit of introducing the practice of intra-uterine scarification. Dr. Miller published an account of his practice in 1867. The writer strongly urged the practice of free scarification in many of the forms of uterine disease.

Dr. George S. Stebbins, of Springfield, read a paper on the Value of Med-

ical Opinions. The reader considered many of the problems which are daily presenting themselves to the mind of the physician and those with whom he has to do. He urged the importance of the physician being well versed in the various branches of physical science. He alluded to the perils to which the profession is subjected by unjust suits for malpractice; to sanitation and state boards of health; to medical education and the efforts to raise its standard; and concluded with a tribute to the work of Howard in this direction.

Dr. George Jewett, of Fitchburg, presented a paper on Surgical Injuries of the Head. His paper was based upon several cases which had occurred in his practice and of which the histories were given. In these there was fracture of the skull with effusion of blood between the dura mater and the bone. Dr. Jewett urged *early* operation in cases of such extravasation complicated with symptoms of compression, concussion, etc. The operation should be performed before the case has had time to run through the various stages of inflammation.

Dr. George W. Doane, of Hyannis, read the concluding paper of the session on A Disease Peculiar to Young Men. He had observed many cases which were commonly attributed to be the victims of self-abuse, but which he was convinced were not such, where mental depression and sometimes insanity finally resulted. These patients were subjects of frequent involuntary seminal emissions. They occurred in the children of the better class of society, who had been brought up under the best of influences, and were not guilty of immoral and debasing practices. The only cure he could recommend was marriage.

Dr. Martin, of Roxbury, showed the splint invented by Dr. Carr, of New Hampshire, and spoke of the excellent results obtained from its use in Colles's fracture.

Dr. Marcy, of Cambridge, exhibited an apparatus of his own invention for the rolling of plaster bandages.

Delegates from New York, Connecticut, and New Hampshire were presented to the society. Dr. Jenkins presented the congratulations of the New York State Medical Society and Dr. Chamberlin those of the Connecticut Society.

[A telegram from the Rhode Island Medical Society, sending greeting and good-will to the Massachusetts Medical Society, was not received until after the adjournment of the anniversary exercises.]

At twelve o'clock the annual discourse was delivered by Dr. John B. Bronson, of Attleboro', and at the conclusion of the address an appropriate vote of thanks was given to the orator.

At one o'clock the society adjourned to the Music Hall, where to the number of nearly six hundred the Fellows entered upon the exercises of the anniversary dinner.

At the meeting of the Councillors, held Tuesday evening, the following officers were elected for the ensuing year:—

President, Dr. William Cogswell, of Bradford; Vice-President, Dr. Gilman Kimball, of Lowell; Treasurer, Dr. F. W. Draper, of Boston; Corresponding Secretary, Dr. C. W. Swan, of Boston; Recording Secretary, Dr.

F. W. Goss, of Roxbury; Librarian, Dr. D. H. Hayden, of Boston; Orator, Dr. Francis Minot, of Boston; Anniversary Chairman, Dr. Peter Pineo of Hyannis.

The treasurer's report showed a balance of \$2123.77. It was voted to distribute seventy-five per cent. of this balance among the district societies.

The dinner was in most respects more than usually successful. The speeches were short and to the point, and Dr. Hosmer presided with dignity and skill. Governor Rice made a very good speech. He said that the State cordially greeted all who promoted her welfare. Especially she was pleased to bring greetings to this ancient association. In the Revolutionary period, members of this profession were among the bravest advocates of freedom. During the whole intervening period the society had preserved a brilliant and illustrious record, containing the names of those who contributed to our honor and renown. But a few days ago he received a request from London for the publications of our Board of Health, and, so far as was possible, the request would be granted. True medical science derived knowledge from deduction and experiment. When the coroners of Suffolk County were displaced and their number reduced to two, his excellency wondered by what process a satisfactory selection could be made. The president of the society, perhaps, was acquainted with the secret alchemy required to solve the problem.

Colonel John D. Washburn, of Worcester, in replying to the toast to the legislature, spoke at some length on the coroner system, and traced its decline from its former dignity to its present contempt. In speaking of selecting the medical examiners who are to take the place of coroners, he asked who could be chosen except members of this society.

Professor Austin Flint, of New York, expressed much pleasure in claiming Massachusetts as his native State. His credentials were derived from the Harvard Medical School, where he listened to the instructions of Jackson and Ware. Among his fellow-students were Drs. Bowditch, Shattuck, and others who were present. He gratefully acknowledged the honorary membership conferred by this society.

The Hon. Theodore Lyman replied to the toast on fish culture in a very humorous speech. He said that he had some claim to be present among physicians, as he was a constant reader of the *JOURNAL*, of which he spoke in the most flattering terms.

Dr. D. Humphreys Storer responded to the sentiment: "The two methods of medical education, the old and the new." He said that he did not wish to detract a tittle from the merits of the recent authorities, but that the labors of former years should not be forgotten, and said that the new method began when he and some other gentlemen founded the Tremont Medical School some thirty years ago.

President Eliot was the next speaker. He said that the policy at Harvard in regard to discipline was to allow much freedom to the student. The merit of doing right implied the liberty to sin; and that we should overcome evil with good. Further improvements were expected at Harvard. In addition to the examination previous to the admission of medical students, a fourth year of study would probably be added. It was impossible for medical education to aim too high.

The Hon. J. B. D. Cogswell, president of the state senate, responded to the following: "The Doctor *vs.* the Lawyer as a Legislator." There always was, or should be, harmony between the two. He paid a glowing tribute to the country doctor, selecting as his type Dr. T. M. Stone, an excellent practitioner on the Cape in former years.

In conclusion, the chairman gave out "The Medical Profession; there is not a man in the community who does not desire the doctor to be good, elevated, and pure."

FOSTER'S PHYSIOLOGY.¹

AMONG the numerous text-books of physiology which have made their appearance within the last five years, the volume before us is preëminent not only as a remarkably successful presentation of all the more recent acquisitions in physiological science, but as a work abounding in wise suggestions as to the direction in which truth is to be sought in those fields where investigations have as yet yielded only uncertain results.

The work is by no means elementary in its character. The author presupposes in his readers a general knowledge of anatomy, histology, physics, and chemistry, and such an acquaintance with physiology as may be obtained from Huxley's *Elementary Lessons*. A student of physiology possessed of this amount of elementary knowledge could scarcely find in any language — and certainly not in English — a book more sure to repay a conscientious and thorough perusal.

The order in which the various subjects are discussed is well adapted to lead the student onward from simple to complicated problems, the work being divided into four books as follows: —

Book I. Blood. The tissues of movement. The vascular mechanism.

Book II. The tissues of chemical action, with their respective mechanisms.

Book III. The central nervous system and its instruments.

Book IV. The tissues and mechanisms of reproduction.

In each of these subdivisions are to be found clear statements and judicious criticisms of the labors of recent investigators. Thus in Book I. we find in the first chapter the best description in the English language of Schmidt's observations on the coagulation of the blood, in the second chapter an admirable description of the changes occurring in muscular contraction, and in the fourth chapter a very clear account of the hydraulic principles concerned in the circulation of the blood, etc.

Recent investigations on the functions of the cortex cerebri are fully discussed in the appropriate place, the author being inclined to the belief that the definite movements caused by electrical stimulation of certain convolutions are "due to the escape of the current from the surface to which the electrodes are applied to deeper underlying portions of the brain, the escape taking place along definite lines determined by the electrical conductivity of the brain substance."

¹ *A Text-Book of Physiology.* By M. FOSTER, M. D., F. R. S. London: Macmillan & Co. 1877.

The only passage in the entire work which gives evidence of a want of thoroughness in its preparation is the description of the causes which at birth lead to the establishment of the respiratory movements. According to the author, "during the whole time of intra-uterine life the amount of oxygen in the blood passing from the aortic arch to the medulla oblongata is sufficient to prevent any inspiratory impulses being originated in the medullary respiratory centre. . . . As soon, however, as the intercourse between the maternal and umbilical blood is interrupted by separation of the placenta or, by ligature of the umbilical cord, or when in any other way arterial blood ceases to find its way by the left ventricle to the medulla oblongata, the supply of oxygen in the respiratory centre sinks, and when the fall has reached a certain point an impulse of inspiration is generated and the fœtus for the first time breathes."

This theory obviously fails to account for the respiratory movements of the child occurring at the moment of birth in cases of adherent placenta with lack of uterine contractility, and in the case of the first of a pair of twins attached to the same placenta. Moreover, Pflüger has shown by experiments on rabbits that compression of the cord at its abdominal insertion or the pinching of any point on the surface of the body produces only a single inspiratory movement, and that after separation of the placenta rhythmical respiratory movements are established only when the membranes over the head are divided, so as to allow the air to come in contact with the face. It seems therefore evident, both from the observations of the obstetrician and from the experiments of the physiologist, that the essential condition for the commencement of the normal respiration is to be sought in the contact of the external air with the surface of the body, although deficiency of oxygen in the blood may in certain pathological conditions call forth the first inspiratory act.

It is very satisfactory to notice the adoption throughout the work of the metric system of weights and measures, but the use of unfamiliar units has led in some instances to inaccurate statements which will doubtless be corrected in a future edition. Thus the maximum work of one gram of frog's muscle is spoken of as three to seven kilogrammeters (instead of grammeters), and the rate of movement of the contraction wave in the ureter is given as twenty to thirty meters (instead of millimeters) in one second. B.

DISMISSAL OF CORONER NEWTON.

WE have already alluded to the receipt by the legislature of a petition signed by many of the leading physicians and surgeons of Boston requesting that Newton's commission as coroner be revoked. Several hearings were appointed, at all of which Newton failed to put in an appearance on account of a severe and dangerous sickness. The question of jurisdiction having been raised, the legislature came to the conclusion that as a coroner was not a judicial officer the legislature could not take any steps looking to his removal. Accordingly the evidence and papers in the case were sent by the legislature to the governor, and by him brought before his council. Here they were referred to a committee consisting of councillors Cogswell, Toland, and Childs. After a

thorough examination of the evidence submitted to them, they made a report to the council June 14th, unanimously recommending that the commission of Coroner Newton be revoked for the following reasons:—

First. Because the evidence shows a want of moral principle and a disregard for truth on the part of said Newton.

Second. Because the evidence further shows a want of knowledge of his duties as coroner, or a culpable disregard of law, and frequent breaches of trust in his official capacity.

Third. Because in his conduct of the Clara Fisher case, a full report of which was before the committee, the said Newton exhibited more the spirit of a prosecutor than of a judicial officer, with apparently more of a desire to involve innocent parties than to obtain the real facts in the case.

This report was unanimously adopted by the council, and, in accordance with the recommendation, a writ of *superedeas* was issued June 14th by the governor revoking and annulling Newton's commission. The writ was given June 16th to the sheriff of Suffolk County with directions to serve it.

With the account of this dishonorable dismissal of Newton from his office as coroner we close our history of a libel suit which Newton began against us when we protested against his appointment as coroner because he did "not appear to have the standing, education, or character which the position" demanded, although he believes "himself to be a competent and suitable person to perform the duties of coroner."

A MEDICAL LAWSUIT IN MAINE.

We have been obliged to defer till now some remarks on a suit for alleged malpractice at Bangor, which apparently has attracted much attention in Maine. The defendant, Dr. E. F. Sanger, is president of the Maine Medical Association, and has held many medical positions of importance both in civil and military life. The suit, which bore a somewhat suspicious appearance, was brought by the father of a child operated on for talipes, in 1871, when thirteen months old. The evidence for the prosecution was certainly very peculiar. Physicians, who had never seen the case till shortly before the trial, swore that the trouble had been paralysis of the peronei, and endeavored to show that the operation had been badly performed as a little blood was lost. They stated also that the sheath of the tendon should not be injured, and dwelt a good deal on Sayre's writings, to supply the want of experience on their own part. It was shown by the defense that Dr. Sanger had received no pay for services and only a part of the cost of apparatus. Drs. Hill and Tewksbury testified for the defendant. The prosecution evidently had at best a very weak case, but remembering how inclined juries are to be misled under such circumstances, we are very glad to congratulate Dr. Sanger on his acquittal.

MEDICAL NOTES.

— *The New York Medical Record* makes some remarks on the address which Dr. Fordyce Barker delivered at the recent meeting of the American Gynecological Society. They seem well worthy of notice.

"Without wishing to ignore the just claims of operative gynecology, he very properly urged the giving of more attention to the medical treatment of uterine disease. There is no doubt that this latter branch of our science has been too much neglected,—that many operations have been done more because they were fashionable than for any good conferred by them upon the patient. It is so easy to gain credit by such procedures, that it is no wonder that so many yield to the temptation. Then, again, the uterus is so non-retaliatory that it invites all sorts of inroads upon its textural integrity. The shedding of uterine blood apparently begets an insatiety for gynecological operations, which, when once established, is sometimes dreadful to contemplate. Cases are on record in which surgeons have timidly begun with incising the os, then with excising the cervix, body, and fundus of the uterus, and lastly, when ovaries were included in the ablation, have actually mourned that nothing more was left to conquer. The fact that some of these patients get well may help to prove that, gynecologically speaking, the uterus and appendages are incumbrances. But the other side of the argument is that women who are not operated upon, whose uteri know not the knife, the scissors, écraseur, or pessary, also get well. This is certainly great comfort to the ordinary practitioner, who has a healthy fear of disturbing peritoneal coverings, of poking pessaries into the bladder, of mistaking the uterus for the ovary, and of any of the other trivial accidents which occasionally happen in the higher walks of gynecology. The fact is that the desire to cut, twist, burn, amputate, electrolyze, and pessarize the uterus has amounted almost to a mania. The aspiring gynecologist who has been unable to devise a new operation, invent a speculum or modify an old one, has been compelled to infuse his energies either into a new cautery iron, a novel back-action curette, or a manifold self-acting elevator. If, perhaps, he fails in every other way in encouraging operative procedure, he gives a new and important twist to a pessary, establishes a principle, and makes a reputation. But if the time has come for a change of opinion, if the worst must come to the worst, advocates of the new doctrine can do no more than arrest the study of surgical statistics, and, as a possible consequence, create a corner in uterine pathology. In any event we are willing to give the uterus one more chance."

— Dr. L. D. Bulkley uses the following ointment to allay itching:—

Ry Pulv. gummi camphoræ

Chloral hydrat.

Ung. aquæ rosæ

ss 3i.

3i. M.

The chloral and camphor are to be carefully rubbed together till a fluid results, and then the ointment is to be added slowly and well mixed.

It does not answer when the skin is at all broken; the burning sensation caused on its first application lasts but a few moments, while the relief lasts

for hours or the whole day even. (Transactions of the American Medical Association.)

— In giving statistics regarding the consumption of leeches in the Paris hospitals, *L'Union médicale* remarks upon the prevalence of venesection during the first half of the present century. With its decline the use of leeches has also greatly lessened. The annual consumption of leeches in the hospitals of Paris from 1820 to 1824 was some 183,000; from 1824 to 1830, 508,000; from 1830 to 1842, 828,000; from 1842 to 1850, 430,000; from 1850 to 1855, 225,000; from 1855 to 1863, 138,000; from 1863 to 1870, 93,000; from 1870 to 1875, 52,000. In 1835 the expenditure for leeches in the hospitals was 90,000 francs; to-day it is not more than 1800 francs.

— The following is a literal copy (names only being omitted) of a note recently received by a prominent Boston surgeon from a town in New England.

“ May 22 the 1877

DEAR SIR I have in my hands A Receipt for Curin Cancers without the uce of the Nife or Plaster which i want to Sell to Some of you Surgeons for the Poor human Rase that Sufer Pane By Plasters and the nife and this Soothes the pane this is no humbug Nor am i a imposter Nor a Scoundral and if you want A Recermendation of my Cariture you Can have it this has Cured Cancers on a lady Brest after all Doctors had given her up And it was as Big as a pint Bole it took all the Pane out And took the Cancir of and i think it Cant Be Beat i Can almost Chaling the world to Beat it thare is no Pane nor Suferin A Bout it I do this Because i think you Aught to have it And if you want it you write to me at once i have the Receipt and the Proof of what it has don for those that have Ben Cured By its use

It is a 15,000 dollar Receipt

Yours Truley ”

— Madras, says *The Medical Press and Circular*, continues in a terrible state of unhealthiness, the last official returns giving the mortality at 146 per 1000 of the population; this rate included 387 fatal cases of small-pox and 132 of cholera. The highest death-rate in Europe at the present time is in Pesth, with 41 per 1000.

KNOT IN THE UMBILICAL CORD.

MESSRS. EDITORS, — In the JOURNAL of 10th of May, Dr. D. E. Wells, of Bethlehem, N. H., gives a case of knot in the umbilical cord, with death of the child.

In a practice of twenty-seven years I have met with one similar case. In December, 1875, Mrs. N. had a tedious labor; child still born, cuticle loosened in places, showing that death had taken place some time before birth. The cord was very long, fifty or sixty inches, — I am not certain which, but it was carefully measured. There was a single knot firmly tied in the cord, of course stopping circulation and causing the death of the fetus. The child was large, and only a very long cord would render such a knot possible. Motion of child had ceased before I was called. The mother did well. Yours truly,

J. W. SMITH.

CHARLES CITY, IOWA.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING JUNE 9, 1877.

	Estimated Population, July 1, 1877.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1876.
New York	1,077,228	430	20.76	27.46
Philadelphia	850,856	328	20.05	22.88
Brooklyn	527,830	197	19.41	24.31
Chicago	420,000			20.41
Boston	363,940	97	13.86	23.39
Providence	103,000	30	15.14	18.34
Worcester	52,977	15	13.74	22.00
Lowell	53,678	23	22.28	22.21
Cambridge	51,572	11	11.08	20.54
Fall River	50,370	9	9.29	22.04
Lawrence	37,626	11	15.20	23.32
Lynn	34,524	9	13.56	21.37
Springfield	32,976	6	9.46	19.69
Salem	26,739	5	9.72	23.57

MILITARY APPOINTMENTS.—April 10, 1877, George S. Osborne, M. D., of Peabody, to be surgeon (rank major), second corps of Cadets, M. V. M., vice Southard, discharged by reason of change of commanding officer. May 1, 1877, Samuel Howe, M. D., of Boston, to be assistant surgeon Fifth Regiment of Infantry, vice Marion, promoted surgeon Fourth Battalion of Infantry, M. V. M. The above-named gentlemen passed a successful examination before the Board of Medical Officers, M. V. M., May 14, 1877.

EDWARD J. FORSTER, Recorder of Board,

Surgeon Fifth Regiment of Infantry, M. V. M.

May 15, 1877, William A. Dunn, M. D., of Boston, late assistant surgeon Battery A, Light Artillery, to be assistant surgeon of First Battalion of Cavalry, to fill an original vacancy. By chapter 117, acts of 1877, nine more assistant surgeons were allowed.

The following are the existing vacancies in the medical staff of the militia:—

Surgeon Seventh Battalion of Infantry.

Assistant Surgeon First Battalion of Infantry.

" " Second " " "

" " Third " " "

" " Fourth " " "

" " Seventh " " "

" " Ninth " " "

" " First Corps of Cadets.

" " Second Corps of Cadets.

" " Company F, Unattached Cavalry.

" " Battery A, Light Artillery.

ERRATUM.—In our issue of June 7th, page 678, Dr. Bowditch accidentally referred to Caldwell instead of McDowell, of Kentucky, as the first ovariectomist.

BOOKS AND PAMPHLETS RECEIVED.—Medical and Surgical Reports of the Boston City Hospital. Second Series. Boston: Published by the Board of Trustees. 1877.

An Elementary Treatise on Practical Chemistry. By Frank Clowes, D. Sc. Lond. With Illustrations. From the Second English Edition. Philadelphia: Henry C. Lea. 1877.

Micro-Photographs in Histology. By Carl Seiler, M. D. Vol. I. No. 9. Philadelphia: J. H. Coates & Co. 1877.